Jian Ping Gong

List of Publications by Year
in descending order

436 papers	31,670 citations	6486 82 h-index	6349 163 g-index
449 all docs	449 docs citations	449 times ranked	18137 citing authors

#	Article	IF	Citations
1	Facile preparation of cellulose hydrogel with Achilles tendon-like super strength through aligning hierarchical fibrous structure. Chemical Engineering Journal, 2022, 428, 132040.	6.6	20
2	Hydroxyapatiteâ€hybridized doubleâ€network hydrogel surface enhances differentiation of bone marrowâ€derived mesenchymal stem cells to osteogenic cells. Journal of Biomedical Materials Research - Part A, 2022, 110, 747-760.	2.1	3
3	Unique crack propagation of double network hydrogels under high stretch. Extreme Mechanics Letters, 2022, 51, 101588.	2.0	14
4	Azo-Crosslinked Double-Network Hydrogels Enabling Highly Efficient Mechanoradical Generation. Journal of the American Chemical Society, 2022, 144, 3154-3161.	6.6	29
5	Quantitative determination of cationâ€"Ï€ interactions between metal ions and aromatic groups in aqueous media by a hydrogel Donnan potential method. Physical Chemistry Chemical Physics, 2022, 24, 6126-6132.	1.3	1
6	Evaluation of biological responses to micro-particles derived from a double network hydrogel. Biomaterials Science, 2022, 10, 2182-2187.	2.6	3
7	Role of dynamic bonds on fatigue threshold of tough hydrogels. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2200678119.	3.3	24
8	Synthesis of degradable double network gels using a hydrolysable cross-linker. Polymer Chemistry, 2022, 13, 3756-3762.	1.9	3
9	Surfactant induced bilayer-micelle transition for emergence of functions in anisotropic hydrogel. Journal of Materials Chemistry B, 2022, 10, 8386-8397.	2.9	4
10	Synthetic poly(2â€acrylamidoâ€2â€methylpropanesulfonic acid) gel induces chondrogenic differentiation of <scp>ATDC5</scp> cells via a novel protein reservoir function. Journal of Biomedical Materials Research - Part A, 2021, 109, 354-364.	2.1	2
11	The Fracture of Highly Deformable Soft Materials: A Tale of Two Length Scales. Annual Review of Condensed Matter Physics, 2021, 12, 71-94.	5.2	103
12	Micromechanical modeling of the multi-axial deformation behavior in double network hydrogels. International Journal of Plasticity, 2021, 137, 102901.	4.1	36
13	Isotope Microscopic Observation of Osteogenesis Process Forming Robust Bonding of Double Network Hydrogel to Bone. Advanced Healthcare Materials, 2021, 10, e2001731.	3.9	6
14	Constitutive modeling of strain-dependent bond breaking and healing kinetics of chemical polyampholyte (PA) gel. Soft Matter, 2021, 17, 4161-4169.	1.2	6
15	Constitutive modeling of bond breaking and healing kinetics of physical Polyampholyte (PA) gel. Extreme Mechanics Letters, 2021, 43, 101184.	2.0	12
16	Aggregated structures and their functionalities in hydrogels. Aggregate, 2021, 2, e33.	5.2	39
17	Ultrahighâ€Waterâ€Content Photonic Hydrogels with Large Electroâ€Optic Responses in Visible to Nearâ€Infrared Region. Advanced Optical Materials, 2021, 9, 2002198.	3.6	20
18	Rapid reprogramming of tumour cells into cancer stem cells on double-network hydrogels. Nature Biomedical Engineering, 2021, 5, 914-925.	11.6	48

#	Article	IF	Citations
19	Molecular mechanism of abnormally large nonsoftening deformation in a tough hydrogel. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
20	Effect of mesoscale phase contrast on fatigue-delaying behavior of self-healing hydrogels. Science Advances, 2021, 7, .	4.7	37
21	Experimental Verification of the Balance between Elastic Pressure and Ionic Osmotic Pressure of Highly Swollen Charged Gels. Gels, 2021, 7, 39.	2.1	6
22	Nanophase Separation in Immiscible Double Network Elastomers Induces Synergetic Strengthening, Toughening, and Fatigue Resistance. Chemistry of Materials, 2021, 33, 3321-3334.	3.2	37
23	Hierarchical toughening: A step toward matching the complexity of biological materials. CheM, 2021, 7, 1153-1155.	5.8	2
24	Flower-like Photonic Hydrogel with Superstructure Induced via Modulated Shear Field. ACS Macro Letters, 2021, 10, 708-713.	2.3	7
25	Quantitative evaluation of macromolecular crowding environment based on translational and rotational diffusion using polarization dependent fluorescence correlation spectroscopy. Scientific Reports, 2021, 11, 10594.	1.6	15
26	Tough Double Network Hydrogel and Its Biomedical Applications. Annual Review of Chemical and Biomolecular Engineering, 2021, 12, 393-410.	3.3	60
27	Improving the strength and toughness of macroscale double networks by exploiting Poissonâ€™s ratio mismatch. Scientific Reports, 2021, 11, 13280.	1.6	11
28	Ultrapurified Alginate Gel Containing Bone Marrow Aspirate Concentrate Enhances Cartilage and Bone Regeneration on Osteochondral Defects in a Rabbit Model. American Journal of Sports Medicine, 2021, 49, 2199-2210.	1.9	4
29	Structure and Unique Functions of Anisotropic Hydrogels Comprising Uniaxially Aligned Lamellar Bilayers. Bulletin of the Chemical Society of Japan, 2021, 94, 2221-2234.	2.0	18
30	Facile tuning of hydrogel properties by manipulating cationic-aromatic monomer sequences. Science China Chemistry, 2021, 64, 1560-1568.	4.2	14
31	Bioinspired Underwater Adhesives. Advanced Materials, 2021, 33, e2102983.	11.1	178
32	Fast <i>in vivo</i> fixation of double network hydrogel to bone by monetite surface hybridization. Journal of the Ceramic Society of Japan, 2021, 129, 584-589.	0.5	2
33	Tiny yet tough: Maximizing the toughness of fiber-reinforced soft composites in the absence of a fiber-fracture mechanism. Matter, 2021, 4, 3646-3661.	5.0	11
34	A surface flattening method for characterizing the surface stress, drained Poisson's ratio and diffusivity of poroelastic gels. Soft Matter, 2021, 17, 7332-7340.	1.2	2
35	Barnacle Cement Proteinsâ€Inspired Tough Hydrogels with Robust, Longâ€Lasting, and Repeatable Underwater Adhesion. Advanced Functional Materials, 2021, 31, 2009334.	7.8	148
36	Toughening hydrogels through force-triggered chemical reactions that lengthen polymer strands. Science, 2021, 374, 193-196.	6.0	124

#	Article	IF	Citations
37	Structure Frustration Enables Thermal History-Dependent Responsive Behavior in Self-Healing Hydrogels. Macromolecules, 2021, 54, 9927-9936.	2.2	16
38	Revisiting the Origins of the Fracture Energy of Tough Double-Network Hydrogels with Quantitative Mechanochemical Characterization of the Damage Zone. Macromolecules, 2021, 54, 10331-10339.	2.2	22
39	How chain dynamics affects crack initiation in double-network gels. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	12
40	In Situ Evaluation of the Polymer Concentration Distribution of Microphase-Separated Polyelectrolyte Hydrogels by the Microelectrode Technique. Macromolecules, 2021, 54, 10776-10785.	2.2	2
41	Instant Thermal Switching from Soft Hydrogel to Rigid Plastics Inspired by Thermophile Proteins. Advanced Materials, 2020, 32, e1905878.	11.1	97
42	Crack Tip Field of a Double-Network Gel: Visualization of Covalent Bond Scission through Mechanoradical Polymerization. Macromolecules, 2020, 53, 8787-8795.	2.2	65
43	Polyzwitterions as a Versatile Building Block of Tough Hydrogels: From Polyelectrolyte Complex Gels to Double-Network Gels. ACS Applied Materials & Interfaces, 2020, 12, 50068-50076.	4.0	26
44	Stress Relaxation and Underlying Structure Evolution in Tough and Self-Healing Hydrogels. ACS Macro Letters, 2020, 9, 1582-1589.	2.3	31
45	Bactericidal effect of cationic hydrogels prepared from hydrophilic polymers. Journal of Applied Polymer Science, 2020, 137, 49583.	1.3	3
46	Effect of the constituent networks of double-network gels on their mechanical properties and energy dissipation process. Soft Matter, 2020, 16, 8618-8627.	1.2	18
47	Hydrogels as dynamic memory with forgetting ability. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 18962-18968.	3.3	76
48	Preparation of Tough Double- and Triple-Network Supermacroporous Hydrogels through Repeated Cryogelation. Chemistry of Materials, 2020, 32, 8576-8586.	3.2	41
49	Chitin-Based Double-Network Hydrogel as Potential Superficial Soft-Tissue-Repairing Materials. Biomacromolecules, 2020, 21, 4220-4230.	2.6	35
50	High-Fidelity Hydrogel Thin Films Processed from Deep Eutectic Solvents. ACS Applied Materials & Interfaces, 2020, 12, 43191-43200.	4.0	8
51	How surface stress transforms surface profiles and adhesion of rough elastic bodies. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2020, 476, 20200477.	1.0	7
52	Anisotropic Double-Network Hydrogels via Controlled Orientation of a Physical Sacrificial Network. ACS Applied Polymer Materials, 2020, 2, 2350-2358.	2.0	19
53	Double-network gels as polyelectrolyte gels with salt-insensitive swelling properties. Soft Matter, 2020, 16, 5487-5496.	1.2	11
54	Hydrogels toughened by biominerals providing energy-dissipative sacrificial bonds. Journal of Materials Chemistry B, 2020, 8, 5184-5188.	2.9	28

#	Article	IF	Citations
55	Integrin Î±4 mediates ATDC5 cell adhesion to negatively charged synthetic polymer hydrogel leading to chondrogenic differentiation. Biochemical and Biophysical Research Communications, 2020, 528, 120-126.	1.0	8
56	Lamellar Bilayer to Fibril Structure Transformation of Tough Photonic Hydrogel under Elongation. Macromolecules, 2020, 53, 4711-4721.	2.2	7
57	Mesoscale bicontinuous networks in self-healing hydrogels delay fatigue fracture. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 7606-7612.	3.3	86
58	Fabrication of Bioinspired Hydrogels: Challenges and Opportunities. Macromolecules, 2020, 53, 2769-2782.	2.2	185
59	Fiberâ€Reinforced Viscoelastomers Show Extraordinary Crack Resistance That Exceeds Metals. Advanced Materials, 2020, 32, e1907180.	11.1	77
60	Phase Separation Behavior in Tough and Self-Healing Polyampholyte Hydrogels. Macromolecules, 2020, 53, 5116-5126.	2.2	49
61	Non-linear rheological study of hydrogel sliding friction in water and concentrated hyaluronan solution. Tribology International, 2020, 147, 106270.	3.0	7
62	Mechanical behavior of unidirectional fiber reinforced soft composites. Extreme Mechanics Letters, 2020, 35, 100642.	2.0	13
63	Effect of Relative Strength of Two Networks on the Internal Fracture Process of Double Network Hydrogels As Revealed by <i>in Situ</i> Small-Angle X-ray Scattering. Macromolecules, 2020, 53, 1154-1163.	2.2	40
64	Competitive cationâ^'Ï€ interactions between small cations and polycations with phenyl groups in poly(cationâ^'Ï€) hydrogels. Giant, 2020, 1, 100005.	2.5	22
65	Tough double network elastomers reinforced by the amorphous cellulose network. Polymer, 2019, 178, 121686.	1.8	20
66	Polyelectrolyte complexation <i>via</i> viscoelastic phase separation results in tough and self-recovering porous hydrogels. Journal of Materials Chemistry B, 2019, 7, 5296-5305.	2.9	27
67	Hydrogel/Elastomer Laminates Bonded via Fabric Interphases for Stimuli-Responsive Actuators. Matter, 2019, 1, 674-689.	5.0	74
68	Double network hydrogels based on semi-rigid polyelectrolyte physical networks. Journal of Materials Chemistry B, 2019, 7, 6347-6354.	2.9	34
69	A Multiaxial Theory of Double Network Hydrogels. Macromolecules, 2019, 52, 5937-5947.	2.2	24
70	Programmed Diffusion Induces Anisotropic Superstructures in Hydrogels with High Mechanoâ€Optical Sensitivity. Advanced Materials Technologies, 2019, 4, 1900665.	3.0	14
71	Tough Double-Network Gels and Elastomers from the Nonprestretched First Network. ACS Macro Letters, 2019, 8, 1407-1412.	2.3	36
72	Relaxation Dynamics and Underlying Mechanism of a Thermally Reversible Gel from Symmetric Triblock Copolymer. Macromolecules, 2019, 52, 8651-8661.	2.2	12

#	Article	IF	Citations
73	Adjacent cationicâ€“aromatic sequences yield strong electrostatic adhesion of hydrogels in seawater. Nature Communications, 2019, 10, 5127.	5.8	202
74	Modulation and Characterization of the Double Network Hydrogel Surface-Bulk Transition. Macromolecules, 2019, 52, 6704-6713.	2.2	18
75	Macroscale Double Networks: Design Criteria for Optimizing Strength and Toughness. ACS Applied Materials & Interfaces, 2019, 11, 35343-35353.	4.0	49
76	Internal Damage Evolution in Double-Network Hydrogels Studied by Microelectrode Technique. Macromolecules, 2019, 52, 7114-7122.	2.2	10
77	Fabrication of Tough Hydrogel Composites from Photoresponsive Polymers to Show Double-Network Effect. ACS Applied Materials & Interfaces, 2019, 11, 37139-37146.	4.0	24
78	Effect of Structure Heterogeneity on Mechanical Performance of Physical Polyampholytes Hydrogels. Macromolecules, 2019, 52, 7369-7378.	2.2	42
79	Shearing-induced contact pattern formation in hydrogels sliding in polymer solution. Soft Matter, 2019, 15, 1953-1959.	1.2	1
80	Mechanoresponsive self-growing hydrogels inspired by muscle training. Science, 2019, 363, 504-508.	6.0	526
81	Facile synthesis of novel elastomers with tunable dynamics for toughness, self-healing and adhesion. Journal of Materials Chemistry A, 2019, 7, 17334-17344.	5.2	70
82	Hydrophobic Hydrogels with Fruitâ€Like Structure and Functions. Advanced Materials, 2019, 31, e1900702.	11.1	64
83	Fabrication of Tough and Stretchable Hybrid Double-Network Elastomers Using Ionic Dissociation of Polyelectrolyte in Nonaqueous Media. Chemistry of Materials, 2019, 31, 3766-3776.	3.2	86
84	Superior fracture resistance of fiber reinforced polyampholyte hydrogels achieved by extraordinarily large energy-dissipative process zones. Journal of Materials Chemistry A, 2019, 7, 13431-13440.	5.2	40
85	Damage cross-effect and anisotropy in tough double network hydrogels revealed by biaxial stretching. Soft Matter, 2019, 15, 3719-3732.	1.2	17
86	Osteochondral Autograft Transplantation Technique Augmented by an Ultrapurified Alginate Gel Enhances Osteochondral Repair in a Rabbit Model. American Journal of Sports Medicine, 2019, 47, 468-478.	1.9	7
87	Toughening Mechanism of Double Network Gels and New Research Trends. Nippon Gomu Kyokaishi, 2019, 92, 352-356.	0.0	0
88	Fracture Process of Double-Network Gels by Coarse-Grained Molecular Dynamics Simulation. Macromolecules, 2018, 51, 3075-3087.	2.2	32
89	A Facile Method to Fabricate Anisotropic Hydrogels with Perfectly Aligned Hierarchical Fibrous Structures. Advanced Materials, 2018, 30, 1704937.	11.1	244
90	Tough and Variable-Band-Gap Photonic Hydrogel Displaying Programmable Angle-Dependent Colors. ACS Omega, 2018, 3, 55-62.	1.6	18

#	Article	IF	Citations
91	Creating Stiff, Tough, and Functional Hydrogel Composites with Lowâ€Meltingâ€Point Alloys. Advanced Materials, 2018, 30, e1706885.	11.1	81
92	Network elasticity of a model hydrogel as a function of swelling ratio: from shrinking to extreme swelling states. Soft Matter, 2018, 14, 9693-9701.	1.2	71
93	Double Network Gels: Tough Particleâ€Based Double Network Hydrogels for Functional Solid Surface Coatings (Adv. Mater. Interfaces 23/2018). Advanced Materials Interfaces, 2018, 5, 1870118.	1.9	2
94	Micro patterning of hydroxyapatite by soft lithography on hydrogels for selective osteoconduction. Acta Biomaterialia, 2018, 81, 60-69.	4.1	22
95	How Supertough Gels Break. Physical Review Letters, 2018, 121, 135501.	2.9	22
96	Tough Particleâ€Based Double Network Hydrogels for Functional Solid Surface Coatings. Advanced Materials Interfaces, 2018, 5, 1801018.	1.9	78
97	Elasticâ€“Plastic Transformation of Polyelectrolyte Complex Hydrogels from Chitosan and Sodium Hyaluronate. Macromolecules, 2018, 51, 8887-8898.	2.2	37
98	Multiscale Energy Dissipation Mechanism in Tough and Self-Healing Hydrogels. Physical Review Letters, 2018, 121, 185501.	2.9	104
99	Tough Hydrogels with Fast, Strong, and Reversible Underwater Adhesion Based on a Multiscale Design. Advanced Materials, 2018, 30, e1801884.	11.1	235
100	Distinctive Characteristics of Internal Fracture in Tough Double Network Hydrogels Revealed by Various Modes of Stretching. Macromolecules, 2018, 51, 5245-5257.	2.2	35
101	Tough and Selfâ€Recoverable Thin Hydrogel Membranes for Biological Applications. Advanced Functional Materials, 2018, 28, 1801489.	7.8	47
102	TEM Observation of Nano-Scale Hydrogel Network Structure. ECS Meeting Abstracts, 2018, , .	0.0	0
103	Antibacterial Property of Cationic Hydrogels. ECS Meeting Abstracts, 2018, , .	0.0	0
104	Self-Toughening of Double Network Hydrogels By Using Bond Rupture-Induced Radical Polymerization. ECS Meeting Abstracts, 2018, , .	0.0	0
105	(Invited) Distinctive Characteristics of Internal Fracture in Tough Double Network Hydrogels Revealed By Various Modes of Stretching. ECS Meeting Abstracts, 2018, , .	0.0	0
106	(Invited) Creating â€œDouble Networkâ€•Composites Via Macroscale Reinforcement. ECS Meeting Abstracts, 2018, , .	0.0	0
107	Energyâ€Dissipative Matrices Enable Synergistic Toughening in Fiber Reinforced Soft Composites. Advanced Functional Materials, 2017, 27, 1605350.	7.8	116
108	Supramolecular hydrogels with multi-cylindrical lamellar bilayers: Swelling-induced contraction and anisotropic molecular diffusion. Polymer, 2017, 128, 373-378.	1.8	20

#	Article	IF	Citations
109	Tough polyion-complex hydrogels from soft to stiff controlled by monomer structure. Polymer, 2017, 116, 487-497.	1.8	38
110	Anisotropic tough double network hydrogel from fish collagen and its spontaneous inÂvivo bonding to bone. Biomaterials, 2017, 132, 85-95.	5.7	122
111	Bulk Energy Dissipation Mechanism for the Fracture of Tough and Self-Healing Hydrogels. Macromolecules, 2017, 50, 2923-2931.	2.2	102
112	Anisotropic Growth of Hydroxyapatite in Stretched Double Network Hydrogel. ACS Nano, 2017, 11, 12103-12110.	7.3	41
113	Water-Triggered Ductileâ€"Brittle Transition of Anisotropic Lamellar Hydrogels and Effect of Confinement on Polymer Dynamics. Macromolecules, 2017, 50, 8169-8177.	2.2	29
114	Tough, self-recovery and self-healing polyampholyte hydrogels. Polymer Science - Series C, 2017, 59, 11-17.	0.8	12
115	Inorganic/Organic Doubleâ€Network Gels Containing Ionic Liquids. Advanced Materials, 2017, 29, 1704118.	11.1	165
116	Effects of osteochondral defect size on cartilage regeneration using a double-network hydrogel. BMC Musculoskeletal Disorders, 2017, 18, 210.	0.8	17
117	Stimuli-Responsive Transformation of a Gradient Gel. Kobunshi Ronbunshu, 2017, 74, 311-318.	0.2	0
118	Molecular structure and properties of click hydrogels with controlled dangling end defect. Journal of Polymer Science, Part B: Polymer Physics, 2016, 54, 1227-1236.	2.4	10
119	Doubleâ€Network Hydrogels Strongly Bondable to Bones by Spontaneous Osteogenesis Penetration. Advanced Materials, 2016, 28, 6740-6745.	11.1	225
120	Sensing surface mechanical deformation using active probes driven by motor proteins. Nature Communications, 2016, 7, 12557.	5.8	46
121	Strong and Tough Polyion-Complex Hydrogels from Oppositely Charged Polyelectrolytes: A Comparative Study with Polyampholyte Hydrogels. Macromolecules, 2016, 49, 2750-2760.	2.2	91
122	Self-Healing Behaviors of Tough Polyampholyte Hydrogels. Macromolecules, 2016, 49, 4245-4252.	2.2	191
123	Coupled instabilities of surface crease and bulk bending during fast free swelling of hydrogels. Soft Matter, 2016, 12, 5081-5088.	1.2	20
124	Stretching-induced ion complexation in physical polyampholyte hydrogels. Soft Matter, 2016, 12, 8833-8840.	1.2	47
125	Creep Behavior and Delayed Fracture of Tough Polyampholyte Hydrogels by Tensile Test. Macromolecules, 2016, 49, 5630-5636.	2.2	42
126	Hydroxyapatite-coated double network hydrogel directly bondable to the bone: Biological and biomechanical evaluations of the bonding property in an osteochondral defect. Acta Biomaterialia, 2016, 44, 125-134.	4.1	35

#	ARTICLE	IF	CITATIONS
127	Fundamental biomaterial properties of tough glycosaminoglycan-containing double network hydrogels newly developed using the molecular stent method. Acta Biomaterialia, 2016, 43, 38-49.	4.1	22
128	Synthetic <scp>PAMPS</scp> gel activates <scp>BMP</scp>/Smad signaling pathway in <scp>ATDC</scp>5 cells, which plays a significant role in the gelâ€induced chondrogenic differentiation. Journal of Biomedical Materials Research - Part A, 2016, 104, 734-746.	2.1	11
129	Quantitative Observation of Electric Potential Distribution of Brittle Polyelectrolyte Hydrogels Using Microelectrode Technique. Macromolecules, 2016, 49, 3100-3108.	2.2	37
130	Decoupling dual-stimuli responses in patterned lamellar hydrogels as photonic sensors. Journal of Materials Chemistry B, 2016, 4, 4104-4109.	2.9	34
131	<i>In vivo</i> cartilage regeneration induced by a doubleâ€network hydrogel: Evaluation of a novel therapeutic strategy for femoral articular cartilage defects in a sheep model. Journal of Biomedical Materials Research - Part A, 2016, 104, 2159-2165.	2.1	18
132	Tough Physical Doubleâ€Network Hydrogels Based on Amphiphilic Triblock Copolymers. Advanced Materials, 2016, 28, 4884-4890.	11.1	442
133	Yielding Criteria of Double Network Hydrogels. Macromolecules, 2016, 49, 1865-1872.	2.2	119
134	Friction of Zwitterionic Hydrogel by Dynamic Polymer Adsorption. Macromolecules, 2015, 48, 5394-5401.	2.2	10
135	Phaseâ€Separationâ€Induced Anomalous Stiffening, Toughening, and Selfâ€Healing of Polyacrylamide Gels. Advanced Materials, 2015, 27, 6990-6998.	11.1	132
136	Selfâ€Adjustable Adhesion of Polyampholyte Hydrogels. Advanced Materials, 2015, 27, 7344-7348.	11.1	160
137	Anisotropic Gelation Induced by Very Little Amount of Filamentous Actin. Macromolecular Chemistry and Physics, 2015, 216, 2007-2011.	1.1	2
138	Drag force on micron-sized objects with different surface morphologies in a flow with a small Reynolds number. Polymer Journal, 2015, 47, 564-570.	1.3	9
139	Double-network hydrogel and its potential biomedical application: A review. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2015, 229, 853-863.	1.0	76
140	Quasi-unidirectional shrinkage of gels with well-oriented lipid bilayers upon uniaxial stretching. Soft Matter, 2015, 11, 237-240.	1.2	14
141	In Vitro Platelet Adhesion of PNaAMPS/PAAm and PNaAMPS/PDMAAm Doubleâ€Network Hydrogels. Macromolecular Chemistry and Physics, 2015, 216, 641-649.	1.1	19
142	Polymer Adsorbed Bilayer Membranes Form Self-Healing Hydrogels with Tunable Superstructure. Macromolecules, 2015, 48, 2277-2282.	2.2	34
143	Oppositely Charged Polyelectrolytes Form Tough, Selfâ€Healing, and Rebuildable Hydrogels. Advanced Materials, 2015, 27, 2722-2727.	11.1	545
144	Tunable one-dimensional photonic crystals from soft materials. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2015, 23, 45-67.	5.6	93

#	Article	IF	Citations
145	Molecular structure of self-healing polyampholyte hydrogels analyzed from tensile behaviors. Soft Matter, 2015, 11, 9355-9366.	1.2	100
146	Extremely tough composites from fabric reinforced polyampholyte hydrogels. Materials Horizons, 2015, 2, 584-591.	6.4	108
147	Swim bladder collagen forms hydrogel with macroscopic superstructure by diffusion induced fast gelation. Journal of Materials Chemistry B, 2015, 3, 7658-7666.	2.9	27
148	Free Reprocessability of Tough and Self-Healing Hydrogels Based on Polyion Complex. ACS Macro Letters, 2015, 4, 961-964.	2.3	96
149	Hydrogels as feeder-free scaffolds for long-term self-renewal of mouse induced pluripotent stem cells. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 375-388.	1.3	15
150	Hydrogel Friction and Lubrication. , 2014, , 145-181.		0
151	Prolonged morphometric study of barnacles grown on soft substrata of hydrogels and elastomers. Biofouling, 2014, 30, 271-279.	0.8	10
152	Mechano-actuated ultrafast full-colour switching in layered photonic hydrogels. Nature Communications, 2014, 5, 4659.	5.8	210
153	Intra-articular administration of hyaluronic acid increases the volume of the hyaline cartilage regenerated in a large osteochondral defect by implantation of a double-network gel. Journal of Materials Science: Materials in Medicine, 2014, 25, 1173-1182.	1.7	14
154	Materials both Tough and Soft. Science, 2014, 344, 161-162.	6.0	341
155	Polyelectrolyte hydrogels for replacement and regeneration of biological tissues. Macromolecular Research, 2014, 22, 227-235.	1.0	36
156	Proteoglycans and Glycosaminoglycans Improve Toughness of Biocompatible Double Network Hydrogels. Advanced Materials, 2014, 26, 436-442.	11.1	155
157	Brittleâ€"ductile transition of double network hydrogels: Mechanical balance of two networks as the key factor. Polymer, 2014, 55, 914-923.	1.8	119
158	Solvent andCa2+triggered robust and fast stress generation by ultrathin triple-network hydrogels. Extreme Mechanics Letters, 2014, 1, 17-22.	2.0	0
159	Fracture Process of Microgel-Reinforced Hydrogels under Uniaxial Tension. Macromolecules, 2014, 47, 3587-3594.	2.2	55
160	Friction of hydrogels with controlled surface roughness on solid flat substrates. Soft Matter, 2014, 10, 3192-3199.	1.2	60
161	In SituObservation of Ca2+Diffusion-Induced Superstructure Formation of a Rigid Polyanion. Macromolecules, 2014, 47, 7208-7214.	2.2	20
162	In situ observation of a hydrogelâ€"glass interface during sliding friction. Soft Matter, 2014, 10, 5589-5596.	1.2	27

#	Article	IF	Citations
163	Control superstructure of rigid polyelectrolytes in oppositely charged hydrogels via programmed internal stress. Nature Communications, 2014, 5, 4490.	5.8	64
164	Sliding Friction of Zwitterionic Hydrogel and Its Electrostatic Origin. Macromolecules, 2014, 47, 3101-3107.	2.2	41
165	Crack Blunting and Advancing Behaviors of Tough and Self-healing Polyampholyte Hydrogel. Macromolecules, 2014, 47, 6037-6046.	2.2	123
166	Significant increase in Young×³s modulus of ATDC5 cells during chondrogenic differentiation induced by PAMPS/PDMAAm double-network gel: Comparison with induction by insulin. Journal of Biomechanics, 2014, 47, 3408-3414.	0.9	5
167	Hydrogel as Low-Friction Materials. , 2014, , 1-10.		1
168	Physical hydrogels composed of polyampholytes demonstrate high toughness and viscoelasticity. Nature Materials, 2013, 12, 932-937.	13.3	1,636
169	Double-Network Strategy Improves Fracture Properties of Chondroitin Sulfate Networks. ACS Macro Letters, 2013, 2, 137-140.	2.3	101
170	A phase diagram of neutral polyampholyte â€" from solution to tough hydrogel. Journal of Materials Chemistry B, 2013, 1, 4555.	2.9	71
171	Hyaluronic acid affects the in vitro induction effects of Synthetic PAMPS and PDMAAm hydrogels on chondrogenic differentiation of ATDC5 cells, depending on the level of concentration. BMC Musculoskeletal Disorders, 2013, 14, 56.	0.8	10
172	Influence of the gel thickness on in vivo hyaline cartilage regeneration induced by double-network gel implanted at the bottom of a large osteochondral defect: Short-term results. BMC Musculoskeletal Disorders, 2013, 14, 50.	0.8	10
173	Multi-functions of hydrogel with bilayer-based lamellar structure. Reactive and Functional Polymers, 2013, 73, 929-935.	2.0	12
174	Double-network acrylamide hydrogel compositions adapted to achieve cartilage-like dynamic stiffness. Biomechanics and Modeling in Mechanobiology, 2013, 12, 243-248.	1.4	16
175	Growth of ring-shaped microtubule assemblies through stepwise active self-organisation. Soft Matter, 2013, 9, 7061.	1.2	26
176	Characterization of internal fracture process of double network hydrogels under uniaxial elongation. Soft Matter, 2013, 9, 1955-1966.	1.2	195
177	Relaxation modes in chemically cross-linked poly(2-methacryloyloxyethyl phosphorylcholine) hydrogels. Soft Matter, 2013, 9, 2166.	1.2	10
178	Lamellarâ€"micelle transition in a hydrogel induced by polyethylene glycol grafting. Soft Matter, 2013, 9, 5223.	1.2	6
179	Synthesis and Fracture Process Analysis of Double Network Hydrogels with a Well-Defined First Network. ACS Macro Letters, 2013, 2, 518-521.	2.3	99
180	Transition between Phantom and Affine Network Model Observed in Polymer Gels with Controlled Network Structure. Macromolecules, 2013, 46, 1035-1040.	2.2	172

#	Article	IF	Citations
181	Double network hydrogels from polyzwitterions: high mechanical strength and excellent anti-biofouling properties. Journal of Materials Chemistry B, 2013, 1, 3685.	2.9	99
182	Supramolecular Assemblies of a Semirigid Polyanion in Aqueous Solutions. Macromolecules, 2013, 46, 3581-3586.	2.2	20
183	Geometric and Edge Effects on Swelling-Induced Ordered Structure Formation in Polyelectrolyte Hydrogels. Macromolecules, 2013, 46, 9083-9090.	2.2	17
184	Fracture energy of polymer gels with controlled network structures. Journal of Chemical Physics, 2013, 139, 144905.	1.2	102
185	Double-Network Hydrogels: Soft and Tough IPN. , 2013, , 1-6.		2
186	Tuning Mechanical Properties of Chondroitin Sulfateâ€‹<scp>B</scp>ased Doubleâ€‹<scp>N</scp>etwork Hydrogels. Macromolecular Symposia, 2013, 329, 9-18.	0.4	9
187	Lamellar Hydrogels with High Toughness and Ternary Tunable Photonic Stopâ€Band. Advanced Materials, 2013, 25, 3106-3110.	11.1	152
188	Barnacle Settlement Behavior on Natural Polymer Gels. Kobunshi Ronbunshu, 2013, 70, 326-330.	0.2	1
189	Optical and Mechanical Properties of a Hydrogel Based on Lamellar Bilayers. Kobunshi Ronbunshu, 2013, 70, 309-316.	0.2	1
190	Active self-organization of microtubules in an inert chamber system. Polymer Journal, 2012, 44, 607-611.	1.3	23
191	Mechanics and physics of hydrogels. Soft Matter, 2012, 8, 8006.	1.2	11
192	High Fracture Efficiency and Stress Concentration Phenomenon for Microgel-Reinforced Hydrogels Based on Double-Network Principle. Macromolecules, 2012, 45, 9445-9451.	2.2	75
193	Nematic growth of microtubules that changed into giant spiral structure through partial depolymerization and subsequent dynamic ordering. Soft Matter, 2012, 8, 11544.	1.2	11
194	Structure Optimization and Mechanical Model for Microgel-Reinforced Hydrogels with High Strength and Toughness. Macromolecules, 2012, 45, 5218-5228.	2.2	119
195	Toughness Enhancement and Stickâ€“Slip Tearing of Double-Network Hydrogels in Poly(ethylene glycol) Solution. Macromolecules, 2012, 45, 4758-4763.	2.2	29
196	Formation of ring-shaped assembly of microtubules with a narrow size distribution at an airâ€“buffer interface. Soft Matter, 2012, 8, 10863.	1.2	30
197	Hydrogels with a macroscopic-scale liquid crystal structure by self-assembly of a semi-rigid polyion complex. Polymer Journal, 2012, 44, 503-511.	1.3	13
198	Anisotropic hydrogel based on bilayers: color, strength, toughness, and fatigue resistance. Soft Matter, 2012, 8, 8008.	1.2	80

#	Article	IF	Citations
199	Swelling-induced long-range ordered structure formation in polyelectrolyte hydrogel. Soft Matter, 2012, 8, 8060.	1.2	22
200	Poly(2â€acrylamidoâ€2â€methylpropanesulfonic acid) gel induces articular cartilage regeneration <i>in vivo</i>: Comparisons of the induction ability between singleâ€and doubleâ€network gels. Journal of Biomedical Materials Research - Part A, 2012, 100A, 2244-2251.	2.1	13
201	A Universal Molecular Stent Method to Toughen any Hydrogels Based on Double Network Concept. Advanced Functional Materials, 2012, 22, 4426-4432.	7.8	175
202	Self-assembled structures of a semi-rigid polyanion in aqueous solutions and hydrogels. Science China Chemistry, 2012, 55, 735-742.	4.2	9
203	Super tough double network hydrogels and their application as biomaterials. Polymer, 2012, 53, 1805-1822.	1.8	611
204	Long-term in situ observation of barnacle growth on soft substrates with different elasticity and wettability. Soft Matter, 2011, 7, 7281.	1.2	21
205	Dynamic self-organization and polymorphism of microtubule assembly through active interactions with kinesin. Soft Matter, 2011, 7, 5654.	1.2	30
206	Controlled Clockwiseâ€“Counterclockwise Motion of the Ring-Shaped Microtubules Assembly. Biomacromolecules, 2011, 12, 3394-3399.	2.6	21
207	Hydrogel with cubic-packed giant concentric domains of semi-rigid polyion complex. Soft Matter, 2011, 7, 1884.	1.2	10
208	Rapid and Reversible Tuning of Structural Color of a Hydrogel over the Entire Visible Spectrum by Mechanical Stimulation. Chemistry of Materials, 2011, 23, 5200-5207.	3.2	109
209	Strain-Induced Molecular Reorientation and Birefringence Reversion of a Robust, Anisotropic Double-Network Hydrogel. Macromolecules, 2011, 44, 3542-3547.	2.2	61
210	Effect of Hyaluronan Solution on Dynamic Friction of PVA Gel Sliding on Weakly Adhesive Glass Substrate. Macromolecules, 2011, 44, 8908-8915.	2.2	19
211	Prolongation of the Active Lifetime of a Biomolecular Motor for in Vitro Motility Assay by Using an Inert Atmosphere. Langmuir, 2011, 27, 13659-13668.	1.6	54
212	Direct Observation on the Surface Fracture of Ultrathin Film Double-Network Hydrogels. Macromolecules, 2011, 44, 3016-3020.	2.2	45
213	Anisotropic Hydrogel from Complexation-Driven Reorientation of Semirigid Polyanion at Ca²⁺ Diffusion Flux Front. Macromolecules, 2011, 44, 3535-3541.	2.2	67
214	Robust bonding and one-step facile synthesis of tough hydrogels with desirable shape by virtue of the double network structure. Polymer Chemistry, 2011, 2, 575-580.	1.9	108
215	Induction of Spontaneous Hyaline Cartilage Regeneration Using a Double-Network Gel. American Journal of Sports Medicine, 2011, 39, 1160-1169.	1.9	31
216	Microgel-Reinforced Hydrogel Films with High Mechanical Strength and Their Visible Mesoscale Fracture Structure. Macromolecules, 2011, 44, 7775-7781.	2.2	248

#	Article	IF	Citations
217	Lamellar Bilayers as Reversible Sacrificial Bonds To Toughen Hydrogel: Hysteresis, Self-Recovery, Fatigue Resistance, and Crack Blunting. Macromolecules, 2011, 44, 8916-8924.	2.2	322
218	Acrylamide Polymer Double-Network Hydrogels. Cartilage, 2011, 2, 374-383.	1.4	26
219	Novel Developed Systems and Techniques Based on Double-Network Principle. Bulletin of the Chemical Society of Japan, 2011, 84, 1295-1311.	2.0	33
220	Spontaneous hyaline cartilage regeneration can be induced in an osteochondral defect created in the femoral condyle using a novel double-network hydrogel. BMC Musculoskeletal Disorders, 2011, 12, 49.	0.8	26
221	Dynamic Behavior and Spontaneous Differentiation of Mouse Embryoid Bodies on Hydrogel Substrates of Different Surface Charge and Chemical Structures. Tissue Engineering - Part A, 2011, 17, 2343-2357.	1.6	20
222	Joint immobilization inhibits spontaneous hyaline cartilage regeneration induced by a novel double-network gel implantation. Journal of Materials Science: Materials in Medicine, 2011, 22, 417-425.	1.7	14
223	Synthetic hydrogels as scaffolds for manipulating endothelium cell behaviors. Chinese Journal of Polymer Science (English Edition), 2011, 29, 23-41.	2.0	15
224	Gene expression profile of the cartilage tissue spontaneously regenerated in vivo by using a novel double-network gel: Comparisons with the normal articular cartilage. BMC Musculoskeletal Disorders, 2011, 12, 213.	0.8	20
225	Effect of void structure on the toughness of double network hydrogels. Journal of Polymer Science, Part B: Polymer Physics, 2011, 49, 1246-1254.	2.4	67
226	How to Integrate Biological Motors towards Bioâ€Actuators Fueled by ATP. Macromolecular Bioscience, 2011, 11, 1314-1324.	2.1	15
227	Surfactant-induced friction reduction for hydrogels in the boundary lubrication regime. Journal of Physics Condensed Matter, 2011, 23, 284107.	0.7	16
228	Formation of motile assembly of microtubules driven by kinesins. Smart Materials and Structures, 2011, 20, 124007.	1.8	6
229	Hydrogels with self-assembling ordered structures and their functions. NPG Asia Materials, 2011, 3, 57-64.	3.8	71
230	Antifouling properties of hydrogels. Science and Technology of Advanced Materials, 2011, 12, 064706.	2.8	77
231	Artificial cartilage made from a novel doubleâ€network hydrogel: <i>In vivo</i> effects on the normal cartilage and <i>ex vivo</i> evaluation of the friction property. Journal of Biomedical Materials Research - Part A, 2010, 93A, 1160-1168.	2.1	44
232	Ligament-like tough double-network hydrogel based on bacterial cellulose. Cellulose, 2010, 17, 93-101.	2.4	95
233	Gene expression, glycocalyx assay, and surface properties of human endothelial cells cultured on hydrogel matrix with sulfonic moiety: Effect of elasticity of hydrogel. Journal of Biomedical Materials Research - Part A, 2010, 95A, 531-542.	2.1	19
234	Study on the Sliding Friction of Endothelial Cells Cultured on Hydrogel and the Role of Glycocalyx on Friction Reduction. Advanced Engineering Materials, 2010, 12, B628.	1.6	11

#	Article	IF	Citations
235	Unidirectional Alignment of Lamellar Bilayer in Hydrogel: Oneâ€Dimensional Swelling, Anisotropic Modulus, and Stress/Strain Tunable Structural Color. Advanced Materials, 2010, 22, 5110-5114.	11.1	256
236	A Polysaccharideâ€Based Container Transportation System Powered by Molecular Motors. Angewandte Chemie - International Edition, 2010, 49, 724-727.	7.2	13
237	In vitro differentiation of chondrogenic ATDC5 cells is enhanced by culturing on synthetic hydrogels with various charge densities. Acta Biomaterialia, 2010, 6, 494-501.	4.1	73
238	Formation of a strong hydrogelâ€"porous solid interface via the double-network principle. Acta Biomaterialia, 2010, 6, 1353-1359.	4.1	78
239	Double Network Hydrogels as Tough, Durable Tissue Substitutes. , 2010, , 285-301.		6
240	Microtubule bundle formation driven by ATP: the effect of concentrations of kinesin, streptavidin and microtubules. Nanotechnology, 2010, 21, 145603.	1.3	29
241	A facile method for synthesizing free-shaped and tough double network hydrogels using physically crosslinked poly(vinyl alcohol) as an internal mold. Polymer Chemistry, 2010, 1, 693.	1.9	62
242	Why are double network hydrogels so tough?. Soft Matter, 2010, 6, 2583.	1.2	1,750
243	Hydrogels with Cylindrically Symmetric Structure at Macroscopic Scale by Self-Assembly of Semi-rigid Polyion Complex. Journal of the American Chemical Society, 2010, 132, 10064-10069.	6.6	47
244	Water-Induced Brittle-Ductile Transition of Double Network Hydrogels. Macromolecules, 2010, 43, 9495-9500.	2.2	104
245	Selective Formation of a Linear-Shaped Bundle of Microtubules. Langmuir, 2010, 26, 533-537.	1.6	35
246	Soft and Wet Materials: From Hydrogels to Biotissues. Advances in Polymer Science, 2010, , 203-246.	0.4	39
247	Dual Network Formation in Polyelectrolyte Hydrogel via Viscoelastic Phase Separation: Role of Ionic Strength and Polymerization Kinetics. Macromolecules, 2010, 43, 8202-8208.	2.2	26
248	A Deformation Mechanism for Doubleâ€Network Hydrogels with Enhanced Toughness. Macromolecular Symposia, 2010, 291-292, 122-126.	0.4	15
249	Spontaneous Redifferentiation of Dedifferentiated Human Articular Chondrocytes on Hydrogel Surfaces. Tissue Engineering - Part A, 2010, 16, 2529-2540.	1.6	21
250	Hierarchical structures of the actin/polycation complexes, investigated by ultra-small-angle neutron scattering and fluorescence microscopy. Soft Matter, 2010, 6, 2021.	1.2	8
251	Spontaneous In Vivo Regeneration of the Articular Cartilage Using a Novel Double-Network Hydrogel. , 2010, , 116-125.		0
252	Synthesis of Novel Double Network Hydrogels via Atom Transfer Radical Polymerization. Composite Interfaces, 2009, 16, 433-446.	1.3	0

#	ARTICLE	IF	CITATIONS
253	Adhesion, Spreading, and Proliferation of Endothelial Cells on Charged Hydrogels. Journal of Adhesion, 2009, 85, 839-868.	1.8	17
254	Electric Field Effect on the Sliding Friction of a Charged Gel. Journal of the Physical Society of Japan, 2009, 78, 084602.	0.7	13
255	Brittle, ductile, paste-like behaviors and distinct necking of double network gels with enhanced heterogeneity. Journal of Physics: Conference Series, 2009, 184, 012016.	0.3	16
256	Mesoscopic Network Structure of a Semiâ€Rigid Polyion Complex Nested in a Polycationic Hydrogel. Advanced Materials, 2009, 21, 4696-4700.	11.1	4
257	Tuning of cell proliferation on tough gels by critical charge effect. Journal of Biomedical Materials Research - Part A, 2009, 88A, 74-83.	2.1	49
258	Photoinduced <i>in situ</i> formation of various Fâ€actin assemblies with a photoresponsive polycation. Journal of Biomedical Materials Research - Part A, 2009, 89A, 424-431.	2.1	4
259	A Novel Doubleâ€Network Hydrogel Induces Spontaneous Articular Cartilage Regeneration <i>in vivo</i> in a Large Osteochondral Defect. Macromolecular Bioscience, 2009, 9, 307-316.	2.1	157
260	ATPâ€fueled soft gel machine with wellâ€oriented structure constructed using actinâ€myosin system. Journal of Applied Polymer Science, 2009, 114, 2087-2092.	1.3	5
261	Orientated Bacterial Cellulose Culture Controlled by Liquid Substrate of Silicone Oil with Different Viscosity and Thickness. Polymer Journal, 2009, 41, 764-770.	1.3	8
262	Nonvolatile and Shape-Memorized Bacterial Cellulose Gels Swollen by Poly(ethylene glycol). Polymer Journal, 2009, 41, 524-525.	1.3	15
263	Nano-biomachine from actin and myosin gels. Polymer Science - Series A, 2009, 51, 689-700.	0.4	6
264	Formation of Well-Oriented Microtubules with Preferential Polarity in a Confined Space under a Temperature Gradient. Journal of the American Chemical Society, 2009, 131, 18089-18095.	6.6	29
265	Mechanism on Polarity Sorting of Actin Bundles Formed with Polycations. Langmuir, 2009, 25, 1554-1557.	1.6	7
266	First Observation of Stickâ€"Slip Instability in Tearing of Poly(vinyl alcohol) Gel Sheets. Macromolecules, 2009, 42, 5425-5426.	2.2	11
267	True Chemical Structure of Double Network Hydrogels. Macromolecules, 2009, 42, 2184-2189.	2.2	258
268	Antifouling activity of synthetic polymer gels against cyprids of the barnacle (<i>Balanus) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 142 Td (	0.8	52
269	Dynamics in Multicomponent Polyelectrolyte Solutions. Macromolecules, 2009, 42, 1293-1299.	2.2	11
270	Antifouling properties of tough gels against barnacles in a long-term marine environment experiment. Biofouling, 2009, 25, 657-666.	0.8	45

#	Article	IF	Citations
271	Direct Observation of Damage Zone around Crack Tips in Double-Network Gels. Macromolecules, 2009, 42, 3852-3855.	2.2	156
272	SUPER TOUGH GELS WITH A DOUBLE NETWORK STRUCTURE. Chinese Journal of Polymer Science (English) Tj ETQq0 0 0 rgBT /Overlock	2.0	25
273	Structural Approaches on the Toughness in Double Network Hydrogels. NATO Science for Peace and Security Series A: Chemistry and Biology, 2009, , 117-138.	0.5	3
274	Ultrathin tough double network hydrogels showing adjustable muscle-like isometric force generation triggered by solvent. Chemical Communications, 2009, , 7518.	2.2	58
275	Friction between like-charged hydrogelsâ€"combined mechanisms of boundary, hydrated and elastohydrodynamic lubrication. Soft Matter, 2009, 5, 1879.	1.2	47
276	Dynamic cell behavior on synthetic hydrogels with different charge densities. Soft Matter, 2009, 5, 1804.	1.2	56
277	Biological responses of novel high-toughness double network hydrogels in muscle and the subcutaneous tissues. Journal of Materials Science: Materials in Medicine, 2008, 19, 1379-1387.	1.7	71
278	Localized Yielding Around Crack Tips of Doubleâ€Network Gels. Macromolecular Rapid Communications, 2008, 29, 1514-1520.	2.0	77
279	Highly Extensible Doubleâ€Network Gels with Selfâ€Assembling Anisotropic Structure. Advanced Materials, 2008, 20, 4499-4503.	11.1	151
280	Tubular bacterial cellulose gel with oriented fibrils on the curved surface. Polymer, 2008, 49, 1885-1891.	1.8	126
281	Production of Bacterial Cellulose with Well Oriented Fibril on PDMS Substrate. Polymer Journal, 2008, 40, 137-142.	1.3	42
282	Thermodynamic Interactions in Double-Network Hydrogels. Journal of Physical Chemistry B, 2008, 112, 3903-3909.	1.2	78
283	Molecular Model for Toughening in Double-Network Hydrogels. Journal of Physical Chemistry B, 2008, 112, 8024-8031.	1.2	50
284	Effect of substrate adhesion and hydrophobicity on hydrogel friction. Soft Matter, 2008, 4, 1033.	1.2	43
285	Friction of a soft hydrogel on rough solid substrates. Soft Matter, 2008, 4, 1645.	1.2	37
286	Interfacial water structure at polymer gel/quartz interfaces investigated by sum frequency generation spectroscopy. Physical Chemistry Chemical Physics, 2008, 10, 4987.	1.3	34
287	Tear Velocity Dependence of High-Strength Double Network Gels in Comparison with Fast and Slow Relaxation Modes Observed by Scanning Microscopic Light Scattering. Macromolecules, 2008, 41, 7173-7178.	2.2	36
288	Morphogenesis of Liposomes Caused by Polycation-Induced Actin Assembly Formation. Langmuir, 2008, 24, 11975-11981.	1.6	8

#	Article	IF	Citations
289	Observation of the Three-Dimensional Structure of Actin Bundles Formed with Polycations. Biomacromolecules, 2008, 9, 537-542.	2.6	20
290	Self-Assembling Structure in Solution of a Semirigid Polyelectrolyte. Macromolecules, 2008, 41, 1791-1799.	2.2	31
291	Ring-Shaped Assembly of Microtubules Shows Preferential Counterclockwise Motion. Biomacromolecules, 2008, 9, 2277-2282.	2.6	68
292	Creation of Double Network Hydrogels with Extremely High Strength and Its Anomalous Fracture Mechanism. Kobunshi Ronbunshu, 2008, 65, 707-715.	0.2	6
293	Flower Petal-like Pattern on Soft Hydrogels during Vodka Spreading. , 2008, , 225-230.		0
294	Integration of Motor Proteins â€" Towards an ATP Fueled Soft Actuator. International Journal of Molecular Sciences, 2008, 9, 1685-1703.	1.8	7
295	Selective Cell Spreading, Proliferation, and Orientation on Micropatterned Gel Surfaces. Journal of Nanoscience and Nanotechnology, 2007, 7, 773-779.	0.9	8
296	Motility and Structural Polymorphism of Polymerâ€"Actin Complex Gel. Journal of Nanoscience and Nanotechnology, 2007, 7, 844-847.	0.9	1
297	Friction of Soft Gel in Dilute Polymer Solution. Macromolecules, 2007, 40, 4313-4321.	2.2	24
298	Anisotropic Gelation Seeded by a Rod-Like Polyelectrolyte. Macromolecules, 2007, 40, 2477-2485.	2.2	19
299	Influence of Cyclohexane Vapor on Stick-Slip Friction between Mica Surfaces. Langmuir, 2007, 23, 7032-7038.	1.6	17
300	Friction Coefficient between Rubber and Solid Substrate â€"Effect of Rubber Thicknessâ€". Journal of the Physical Society of Japan, 2007, 76, 043601.	0.7	18
301	Actin Network Formation by Unidirectional Polycation Diffusion. Langmuir, 2007, 23, 6257-6262.	1.6	16
302	Importance of Entanglement between First and Second Components in High-Strength Double Network Gels. Macromolecules, 2007, 40, 6658-6664.	2.2	129
303	Large Strain Hysteresis and Mullins Effect of Tough Double-Network Hydrogels. Macromolecules, 2007, 40, 2919-2927.	2.2	573
304	Biodegradation of high-toughness double network hydrogels as potential materials for artificial cartilage. Journal of Biomedical Materials Research - Part A, 2007, 81A, 373-380.	2.1	138
305	Surface sliding friction of negatively charged polyelectrolyte gels. Colloids and Surfaces B: Biointerfaces, 2007, 56, 296-302.	2.5	9
306	Platelet adhesion to human umbilical vein endothelial cells cultured on anionic hydrogel scaffolds. Biomaterials, 2007, 28, 1752-1760.	5.7	50

#	Article	IF	Citations
307	The molecular origin of enhanced toughness in double-network hydrogels: A neutron scattering study. Polymer, 2007, 48, 7449-7454.	1.8	75
308	Gel biomachine based on muscle proteins. Polymer Bulletin, 2007, 58, 43-52.	1.7	3
309	Necking Phenomenon of Double-Network Gels. Macromolecules, 2006, 39, 4641-4645.	2.2	235
310	Friction and lubrication of hydrogelsâ€"its richness and complexity. Soft Matter, 2006, 2, 544-552.	1.2	357
311	Anisotropic Nucleation Growth of Actin Bundle:Â A Model for Determining the Well-Defined Thickness of Bundlesâ€. Biochemistry, 2006, 45, 10313-10318.	1.2	25
312	Hydrogels with Extremely High Mechanical Strength. Membrane, 2006, 31, 302-306.	0.0	2
313	Surface friction of gellan gels. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2006, 284-285, 56-60.	2.3	4
314	Polyelectrolyte Gels-Fundamentals and Applications. Polymer Journal, 2006, 38, 1211-1219.	1.3	71
315	Negatively charged polyelectrolyte gels as bio-tissue model system and for biomedical application. Current Opinion in Colloid and Interface Science, 2006, 11, 345-350.	3.4	27
316	Catch and Release of DNA in Coacervate-Dispersed Gels. Macromolecular Rapid Communications, 2006, 27, 1242-1246.	2.0	27
317	Gel machines constructed from chemically cross-linked actins and myosins. Polymer, 2005, 46, 7759-7770.	1.8	8
318	Biomechanical properties of high-toughness double network hydrogels. Biomaterials, 2005, 26, 4468-4475.	5.7	288
319	Mechanically Strong Hydrogels with Ultra-Low Frictional Coefficients. Advanced Materials, 2005, 17, 535-538.	11.1	166
320	Anisotropic Polyion-Complex Gels from Template Polymerization. Advanced Materials, 2005, 17, 2695-2699.	11.1	46
321	Cultivation of endothelial cells on adhesive protein-free synthetic polymer gels. Biomaterials, 2005, 26, 4588-4596.	5.7	83
322	Kinetics of fluid spreading on viscoelastic substrates. Journal of Polymer Science, Part B: Polymer Physics, 2005, 43, 562-572.	2.4	14
323	Toughening of Hydrogels with Double Network Structure. E-Journal of Surface Science and Nanotechnology, 2005, 3, 8-11.	0.1	8
324	Characteristics of chemically cross-linked myosin gels. Journal of Biomaterials Science, Polymer Edition, 2005, 16, 203-218.	1.9	16

#	Article	IF	Citations
325	Elasticâ˘Hydrodynamic Transition of Gel Friction. Langmuir, 2005, 21, 8643-8648.	1.6	72
326	Morphology of Actin Assemblies in Response to Polycation and Salts. Biomacromolecules, 2005, 6, 3005-3009.	2.6	26
327	Polarity and Motility of Large Polymerâ˘Actin Complexes. Biomacromolecules, 2005, 6, 845-849.	2.6	16
328	Effect of Polymer Entanglement on the Toughening of Double Network Hydrogels. Journal of Physical Chemistry B, 2005, 109, 16304-16309.	1.2	177
329	Determination of Fracture Energy of High Strength Double Network Hydrogels. Journal of Physical Chemistry B, 2005, 109, 11559-11562.	1.2	261
330	Nano-Gel Machine Reconstructed from Muscle Proteins. E-Journal of Surface Science and Nanotechnology, 2005, 3, 51-54.	0.1	3
331	Surface Friction of Poly(dimethyl Siloxane) Gel and Its Transition Phenomenon. Tribology Letters, 2004, 17, 505-511.	1.2	16
332	High Mechanical Strength Double-Network Hydrogel with Bacterial Cellulose. Advanced Functional Materials, 2004, 14, 1124-1128.	7.8	635
333	Thermoresponsive Shrinkage Triggered by Mesophase Transition in Liquid Crystalline Physical Hydrogels. Macromolecules, 2004, 37, 5385-5388.	2.2	35
334	Liquid Crystalline Hydrogels:Â Mesomorphic Behavior of Amphiphilic Polyacrylates Bearing Cholesterol Mesogen. Macromolecules, 2004, 37, 187-191.	2.2	21
335	Shear-Induced Mesophase Organization of Polyanionic Rigid Rods in Aqueous Solution. Langmuir, 2004, 20, 6518-6520.	1.6	25
336	Structural Characteristics of Double Network Gels with Extremely High Mechanical Strength. Macromolecules, 2004, 37, 5370-5374.	2.2	198
337	Polymer Gels. Journal of Macromolecular Science - Reviews in Macromolecular Chemistry and Physics, 2004, 44, 87-112.	2.2	138
338	Surface Friction of Hydrogels with Well-Defined Polyelectrolyte Brushes. Langmuir, 2004, 20, 6549-6555.	1.6	75
339	Cooperative Binding in Surfactant-Polymer Association. , 2004, , .		0
340	Water-Swollen Hydrogels with Pendant Terthiophenes. Macromolecular Chemistry and Physics, 2003, 204, 661-665.	1.1	1
341	Formation of Giant Needle-Like Polycation-Bile Acid Complexes. Macromolecular Rapid Communications, 2003, 24, 789-792.	2.0	5
342	Double-Network Hydrogels with Extremely High Mechanical Strength. Advanced Materials, 2003, 15, 1155-1158.	11.1	3,537

#	Article	IF	Citations
343	Thickness decrease of a grafted polyelectrolyte membrane exposed to shear flow. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 2808-2815.	2.4	3
344	Substrate effect on the formation of hydrogels with heterogeneous network structure. Chemical Record, 2003, 3, 40-50.	2.9	17
345	Effect of Hydrophobic Side Chain on Poly(carboxyl acid) Dissociation and Surfactant Binding. Macromolecules, 2003, 36, 8830-8835.	2.2	15
346	Influence of Shear Stress on Cationic Surfactant Uptake by Anionic Gels. Journal of Physical Chemistry B, 2003, 107, 13601-13607.	1.2	6
347	Friction of Gels. 7. Observation of Static Friction between Like-Charged Gels. Journal of Physical Chemistry B, 2003, 107, 10221-10225.	1.2	33
348	Liquid Crystalline Gels. 4. Water- and Stress-Induced Mesophase Transition. Langmuir, 2003, 19, 8134-8136.	1.6	15
349	Growth of Large Polymerâˆ'Actin Complexes. Bioconjugate Chemistry, 2003, 14, 1185-1190.	1.8	34
350	Surface friction of polyelectrolyte gels. Macromolecular Symposia, 2003, 195, 209-216.	0.4	3
351	Friction of Gels. 6. Effects of Sliding Velocity and Viscoelastic Responses of the Network. Journal of Physical Chemistry B, 2002, 106, 4596-4601.	1.2	78
352	Substrate Effect on Topographical, Elastic, and Frictional Properties of Hydrogels. Macromolecules, 2002, 35, 8161-8166.	2.2	39
353	Effect of Surface Roughness of Hydrophobic Substrate on Heterogeneous Polymerization of Hydrogels. Journal of Physical Chemistry B, 2002, 106, 3073-3081.	1.2	26
354	Polymer gels as soft and wet chemomechanical systemsâ€"an approach to artificial muscles. Journal of Materials Chemistry, 2002, 12, 2169-2177.	6.7	74
355	Water-Induced Crystallization of Hydrogels. Langmuir, 2002, 18, 965-967.	1.6	20
356	Novel Thermosensitive IPN Hydrogel Having a Phase Transition Without Volume Change. Macromolecular Rapid Communications, 2002, 23, 171-174.	2.0	22
357	Self-Propagating Association of Zwitterionic Polymers Initiated by Ionene Polymers. Macromolecular Rapid Communications, 2002, 23, 423.	2.0	13
358	Hydrogels with Crystalline or Liquid Crystalline Structure. Macromolecular Rapid Communications, 2002, 23, 447.	2.0	31
359	Crystalline Structure and Thermal Behavior of Water-Soluble Copolymers with Pendant Terthiophenes. Macromolecular Chemistry and Physics, 2002, 203, 176-181.	1.1	1
360	Gel Machines Constructed from Chemically Cross-linked Actins and Myosins. Advanced Materials, 2002, 14, 1124.	11.1	91

#	Article	IF	Citations
361	Inhibitory Effects of Hydrogels on the Adhesion, Germination, and Development of Zoospores Originating from Laminaria angustata. Macromolecular Bioscience, 2002, 2, 163.	2.1	25
362	Surface friction of polymer gels. Progress in Polymer Science, 2002, 27, 3-38.	11.8	81
363	Synthesis of Hydrogels with Extremely Low Surface Friction. Journal of the American Chemical Society, 2001, 123, 5582-5583.	6.6	229
364	Real-Time Laser Sheet Refraction To Monitor in Situ the Heterogeneity of Polymerization Process on Teflon Surface. Macromolecules, 2001, 34, 7829-7835.	2.2	9
365	Effects of Carboxyls Attached at Alkyl Side Chain Ends on the Lamellar Structure of Hydrogels. Macromolecules, 2001, 34, 6024-6028.	2.2	22
366	Microrheological Investigation of Substrate-Induced Gradient Structure in Hydrogels. Macromolecules, 2001, 34, 5725-5726.	2.2	19
367	Heterogeneous Polymerization of Hydrogels on Hydrophobic Substrate. Journal of Physical Chemistry B, 2001, 105, 4565-4571.	1.2	54
368	A Possible Mechanism for the Substrate Effect on Hydrogel Formation. Journal of Physical Chemistry B, 2001, 105, 4572-4576.	1.2	27
369	Liquid Crystalline Gels. 3. Role of Hydrogen Bonding in the Formation and Stabilization of Mesophase Structures. Macromolecules, 2001, 34, 1470-1476.	2.2	25
370	Kinetic study of cell disruption by ionic polymers with varied charge density. Colloid and Polymer Science, 2001, 279, 178-183.	1.0	21
371	Surface friction of polymer gels. Wear, 2001, 251, 1188-1192.	1.5	10
372	Shape memory functions and motility of amphiphilic polymer gels. Polymers for Advanced Technologies, 2001, 12, 136-150.	1.6	45
373	Titration behaviors and spectral properties of hydrophobically modified water-soluble polythiophenes. European Polymer Journal, 2001, 37, 2499-2503.	2.6	12
374	Surface friction of polymer gels. Wear, 2001, 251, 1183-1187.	1.5	19
375	Surface of Gel as the Extremely Low Friction Material. Oleoscience, 2001, 1, 929-934,926.	0.0	0
376	Electrical Behaviors and Mechanical Responses of Polyelectrolyte Gels. , 2001, , .		0
377	Intelligent gelâ€" surface properties and functions of gelsâ€". Macromolecular Symposia, 2000, 159, 215-220.	0.4	2
378	Effects of polyelectrolyte complexation on the UCST of zwitterionic polymer. Polymer, 2000, 41, 141-147.	1.8	110

#	Article	IF	Citations
379	Ionization and orderâ€"disorder transition of hydrogels with ionizable hydrophobic side chain. Journal of Molecular Structure, 2000, 554, 91-97.	1.8	9
380	Effects of charge density and hydrophobicity of ionene polymer on cell binding and viability. Colloid and Polymer Science, 2000, 278, 884-887.	1.0	29
381	Spreading of liquids on gel surfaces. Journal of Chemical Physics, 2000, 113, 8253-8259.	1.2	19
382	Hydrogels with the ordered structures. Science and Technology of Advanced Materials, 2000, 1, 201-210.	2.8	10
383	Controlled Motion of Solvent-Driven Gel Motor and Its Application as a Generator. Langmuir, 2000, 16, 307-312.	1.6	53
384	Friction of Gels. 5. Negative Load Dependence of Polysaccharide Gels. Journal of Physical Chemistry B, 2000, 104, 3423-3428.	1.2	58
385	Liquid-Crystalline Hydrogels. 1. Enhanced Effects of Incorporation of Acrylic Acid Units on the Liquid-Crystalline Ordering. Macromolecules, 2000, 33, 412-418.	2.2	33
386	Effect of Aspect Ratio on Protein Diffusion in Hydrogels. Journal of Physical Chemistry B, 2000, 104, 9904-9908.	1.2	32
387	Environmental Responses of Polythiophene Hydrogels. Macromolecules, 2000, 33, 1232-1236.	2.2	66
388	Effect of Charge on Protein Diffusion in Hydrogels. Journal of Physical Chemistry B, 2000, 104, 9898-9903.	1.2	59
389	Liquid Crystalline Hydrogels. 2. Effects of Water on the Structural Ordering. Macromolecules, 2000, 33, 4422-4426.	2.2	22
390	Fluorinated Water-Swollen Hydrogels with Molecular and Supramolecular Organization. Macromolecules, 2000, 33, 2535-2538.	2.2	12
391	Substrate Effects of Gel Surfaces on Cell Adhesion and Disruption. Biomacromolecules, 2000, 1, 162-167.	2.6	31
392	Chemomechanical bending behaviors of ionizable thin films with gradient network-size. Thin Solid Films, 1999, 350, 289-294.	0.8	5
393	Surfactant binding by polyelectrolyte gels and its application to electro-driven chemomechanics. Polymer International, 1999, 48, 691-698.	1.6	12
394	Molecular and supramolecular structures of complexes formed by polyelectrolyte-surfactant interactions: effects of charge density and compositions. Journal of Polymer Science Part A, 1999, 37, 635-644.	2.5	25
395	In Situ Monitoring of Hydrogel Polymerization Using Speckle Interferometry. Journal of Physical Chemistry B, 1999, 103, 2888-2891.	1.2	24
396	Synthesis and properties of poly(3-thiopheneacetic acid) and its networks via electropolymerization. Synthetic Metals, 1999, 99, 53-59.	2.1	20

#	Article	IF	Citations
397	Titration Behavior and Spectral Transitions of Water-Soluble Polythiophene Carboxylic Acids. Macromolecules, 1999, 32, 3964-3969.	2.2	171
398	Magnetism and compressive modulus of magnetic fluid containing gels. Journal of Applied Physics, 1999, 85, 8451-8455.	1.1	91
399	Effects of Counterions and Co-Ions on the Surfactant Binding Process in the Charged Polymer Network. Journal of Physical Chemistry B, 1999, 103, 6262-6266.	1.2	18
400	Complexation and Crystallization of Anionic Phthalocyanine with Soluble and Cross-Linked Polycations. Langmuir, 1999, 15, 5670-5675.	1.6	4
401	Investigation of Molecular Diffusion in Hydrogel by Electronic Speckle Pattern Interferometry. Journal of Physical Chemistry B, 1999, 103, 6069-6074.	1.2	37
402	Friction of Gels. 3. Friction on Solid Surfaces. Journal of Physical Chemistry B, 1999, 103, 6001-6006.	1.2	140
403	Friction of Gels. 4. Friction on Charged Gels. Journal of Physical Chemistry B, 1999, 103, 6007-6014.	1.2	134
404	Surface friction of hydrogels. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 1999, 75, 122-126.	1.6	2
405	Intelligent Gels. Materials Research Society Symposia Proceedings, 1999, 604, 149.	0.1	2
406	Polymer gels as a chemical valve. Bioseparation, 1998, 7, 269-280.	0.7	9
407	Soft and Wet Materials: Polymer Gels. Advanced Materials, 1998, 10, 827-837.	11.1	519
408	Two-step surfactant binding of solvated and cross-linked poly(N -isopropylacrylamide-co-) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 302 Td	1.0	34
409	Effects of water and cross-linkage on the formation of organized structure in the hydrogels. Polymer Gels and Networks, 1998, 6, 307-317.	0.6	19
410	Low-Frequency Dielectric Relaxation of Polyelectrolyte Gels. Journal of Physical Chemistry B, 1998, 102, 5246-5251.	1.2	33
411	Surfactant Binding of Polycations Carrying Charges on the Chain Backbone:Â Cooperativity, Stoichiometry and Crystallinity. Macromolecules, 1998, 31, 787-794.	2.2	64
412	Kinetic Study of Surfactant Binding into Polymer GelExperimental and Theoretical Analyses. Journal of Physical Chemistry B, 1998, 102, 4566-4572.	1.2	45
413	Solvent-driven chemical motor. Applied Physics Letters, 1998, 73, 2366-2368.	1.5	55
414	Gel friction: A model based on surface repulsion and adsorption. Journal of Chemical Physics, 1998, 109, 8062-8068.	1.2	157

#	Article	IF	Citations
415	Electrical Conductance of Polyelectrolyte Gels. Journal of Physical Chemistry B, 1997, 101, 740-745.	1.2	52
416	Friction of Gels. Journal of Physical Chemistry B, 1997, 101, 5487-5489.	1.2	132
417	Chemomechanical Polymer Gel with Fish-like Motion. Journal of Intelligent Material Systems and Structures, 1997, 8, 465-471.	1.4	44
418	Enhanced velocity of surfactant binding after the volume collapse of an oppositely charged gel. Macromolecular Rapid Communications, 1997, 18, 853-857.	2.0	18
419	Formation of Soluble Complexes by Two-Step Surfactant Bindings. Macromolecules, 1996, 29, 8021-8023.	2.2	20
420	Thermosensitive Polymer Gel by Reversible Surfactant Binding. Macromolecules, 1996, 29, 6803-6806.	2.2	26
421	Shape memory behaviors of crosslinked copolymers containing stearyl acrylate. Macromolecular Rapid Communications, 1996, 17, 539-543.	2.0	95
422	Presence of Electrostatic Potential Wells in the Ionic Polymer Network. Chemistry Letters, 1995, 24, 449-450.	0.7	15
423	Soft and wet touch-sensing system made of hydrogel. Macromolecular Rapid Communications, 1995, 16, 713-716.	2.0	49
424	Modelling and simulation of electrostatic potential distribution in polyelectrolyte gels. Electrochimica Acta, 1995, 40, 2445-2447.	2.6	1
425	Spontaneous Motion of Amphoteric Polymer Gels on Water. Japanese Journal of Applied Physics, 1995, 34, L511-L512.	0.8	21
426	Iridescent coloration of a copolymer gel in an organic solvent. Macromolecular Chemistry and Physics, 1994, 195, 1871-1876.	1.1	3
427	Electrical control of polymer association and its chemomechanical behavior. Macromolecular Rapid Communications, 1994, 15, 73-79.	2.0	3
428	Electroconductive Organogel. 6. Thermal and Electroconductive Characteristics of a Charged Polypeptide Gel in Organic Medium. Macromolecules, 1994, 27, 7877-7879.	2.2	6
429	Photo-Current Characteristics of Two-Layered Organic Thin Films Prepared by Plasma Polymerization. Polymer Journal, 1994, 26, 754-757.	1.3	4
430	Stimuli-responsive polymer gels and their application to chemomechanical systems. Progress in Polymer Science, 1993, 18, 187-226.	11.8	214
431	Preparation of polymeric metalâ€tetracyanoquinodimethane film and its bistable switching. Applied Physics Letters, 1992, 61, 2787-2789.	1.5	28
432	Electroconductive organogel. 4. Electrodriven chemomechanical behaviors of charge-transfer complex gel in organic solvent. Macromolecules, 1991, 24, 6582-6587.	2.2	16

#	Article	IF	Citations
433	Electroconductive organogel. 3. Preparation and properties of a charge-transfer complex gel in an organic solvent. Macromolecules, 1991, 24, 5246-5250.	2.2	38
434	Fractal Pattern Formation of Metal-Containing Polymeric Thin Films Prepared by Plasma Reaction. Bulletin of the Chemical Society of Japan, 1990, 63, 1578-1583.	2.0	4
435	Tough Hydrogel - Learn from Nature. Advances in Science and Technology, 0, , .	0.2	2
436	Tough Double-Network Hydrogels as Scaffolds for Tissue Engineering. Advances in Bioinformatics and Biomedical Engineering Book Series, 0, , 213-222.	0.2	0